Mendel University in Brno

Faculty of Regional Development and International Studies

RESTRICTIVE ALCOHOL POLICIES AND THEIR IMPACT ON AUSTRALIAN SOCIETY

Effectiveness and Overview of Alcohol Policies Interventions

Alena Kůsová

Brno, 2015

Declaration

I declare that I carried out this thesis:

Independently, and only with the cited sources, literature and other professional sources.

I agree that my work will be published in accordance with Section 47b of Act No. 111/1998 Coll. on Higher Education as amended thereafter and in accordance with the Guidelines on Publishing University Student Theses.

I understand that my work relates to the rights and obligations under the Act No. 121/2000 Coll., the Copyright Act, as amended, in particular the fact that Mendel University in Brno has the right to conclude a license agreement on the use of this work as a school work pursuant to Section 60 paragraph 1 of the Copyright Act.

Before closing a license agreement on the use of my thesis with another person (subject) I undertake to request for a written statement of the university that the license agreement in question is not in conflict with the legitimate interests of the university, and undertake to pay any contribution, if eligible, to the costs associated with the creation of the thesis, up to their actual amount.

In Brno, 20/05/2015

Alena Kůsová, author

Acknowledgements

I would like to show gratitude to my mentor and thesis supervisor Mgr. et Mgr. Miroslav Horák, Ph.D. for patience, guidance and inspiration. This thesis wouldn't be the same without your irreplaceable inputs. Thank you very much for the never-ending support.

Abstract

Increasing alcohol use and its impact on human health is a serious topic all around the world. Studies has been done in Australia to set the perfect package of interventions (policies) to lower burden of disease and social costs connected with alcohol. This thesis provides a complex overview of alcohol policies and interventions, which are recommended to be used in the case of Australia. Method of thorough literature research of studies as well as government materials had been used to search for information focused on previewed policies. Implementation of targeted policies is likely to be strongly supported by Australian public. Mentioned interventions will very likely decrease alcohol burden of diseases in Australia and will lead Australia to become country with healthier population.

Key words: Australia, alcohol, volumetric taxation, legislation, interventions.

Vzrůstající konzumace alkoholu a její dopad na lidské zdraví se stává stále vážnějším tématem, o kterém začíná mluvit celý svět. Vědci v Austrálii se začali zajímat jak tento trend snížit a navrhli balíček zásahů a zákonů, které by měli snížit sociální a ekonomické břemeno spojené s konzumací alkoholu. Tato práce podává komplexní přehled navrhovaných zásahů, které jsou doporučeny speciálně pro případ Austrálie. V této práci byla použita metoda literární rešerše, díky které bylo prozkoumáno mnoho studií a materiálů vydaných státem k rozebrání všech navrhovaných zákroků. Implementace vybraných zákroků bude velmi pravděpodobně pozitivně přijata a podporována Australskou veřejností. Zmíněné zákroky velmi pravděpodobně sníží břemeno nemocí spojené s alkoholem v Austrálii a povedou Austrálii k tomu, aby se stala zemí ze zdravější populací.

Klíčová slova: Austrálie, objemové zdanění, legislativa, intervence.

Glossary of Abbreviations

AANA	Australian Association of National Advertisers
ACG	Allen Consulting Group
ACT	Australian Capital Territory
ACTPC	Australian Capital Territory Parliamentary Office
ANPHA	Australian National Preventive Health Agency
AWM	Australian War Memorial
AUD	Australian Dollar
BAC	Blood Alcohol Concentration
BYO	Bring Your Own
CBD	Central Business District
CLGCA	Casino, Liquor and Gaming Control
DALY	Disability Adjusted Life Year
DHA	Department of Health and Ageing
DOH	Department of Health
DRGL	Department of Racing, Gaming and Liquor
DVA	Department of Veterans' Affairs
FCAC	Framework Convention on Alcohol Control
FCTC	Framework Convention Alliance for Tobacco Control
GSA	Government of South Australia
GST	Goods and Services Tax
GTLGB	Government of Tasmania Liquor and Gaming Branch
ICD	International Statistical Classification of Diseases
MCDS	Ministerial Council on Drug Strategy
MLDA	Minimum Legal Drinking Age
NBDS	National Binge Drinking Strategy
NHMRC	National Health and Medicinal Research Council
NPHT	National Preventative Health Taskforce
NSW	New South Wales

NT	Northern Territory
NTA	Northern Territory of Australia
OLGR	Office of Liquor, Gaming and Racing
PCC	Per Capita Consumption
QLD	Queensland
QPC	Queensland Parliamentary Consul
RBT	Random Breath Testing
RSA	Responsible Service of Alcohol
RTD	Ready to Drink
SA	South Australia
TAS	Tasmania
UN	United Nations
VCGLR	Victorian Commission for Gambling and Liquor Regulation
VIC	Victoria
WA	Western Australia
WET	Wine Equalization Tax
WHO	World Health Organization

Table of Contents

1 Introduction

With a new decade there is increasing concern about negative impact of alcohol on Australian society. Concerns about Australian drinking culture and alcohol related harms are now set pretty high on the public health agenda. All this concerns are in reality, call for tighter regulatory controls toward alcohol, its availability, consumption and impacts.

In third chapter I am going to talk about alcohol as a world risk factor. Alcohol is going to be introduced as a cultural tradition but also as a risky element of our everyday lives. Statistics about alcohol consumption and mortality are included in this chapter as well. Next I am going to mention the problem with setting up new regulations and the first steps that have been already taken due to new evidence in this issue.

Fourth chapter is more closely focused on Australia. Australian drinking habits and patterns, per capita consumption and its trends as well as preferred types of drinks for each gender of Australians. Term of Australian Standard Drink is introduced and examples from practice are attached in this chapter. Next I am introducing some main alcohol related campaigns and strategies such as National Binge Drinking Strategy, the Right Mix, National Drug Strategy and Australian Guidelines to Reduce Risks from Drinking Alcohol.

Fifth chapter is focusing on Australian alcohol legislative, its importance and objectives. Licensing legislation valid for each Australian territory and closer look to types of licenses in every Australian state.

Finally the sixth chapter is introducing the package of chosen interventions. There is six of them in total. Minimum legal drinking age, volumetric taxation, advertising bans, brief interventions from communities and general practitioners and measures to reduce drink and driving including media campaigns and random breath testing stations. I look closely to every one of these interventions. There is given background for every intervention as well as evaluation of its effectiveness.

2 Methodology

This thesis is for many reasons written as a literature review, which is a method using renowned book sources and scientific journal articles. To get complex overview and outcome of this thesis, thorough research of studies concerning alcohol, alcohol burden of diseases, social costs connected with alcohol, alcohol interventions, effectiveness of these interventions and impact of alcohol on many targeted groups, written by Australian authors about Australia case has been done. To get really complex conclusion some international studies have been included as well. To complete this research recommendations and strategies of Australian government and its branches were added to this thesis.

Those materials and studies have been found on the internet mostly as a result of search at electronic databases such as Web of Science, Mendeley, Google Scholar and others. Current versions of Australian legislations, laws and policies were found at the government web pages. All used materials should give enough information to answer the hypothesis of this thesis: **"Are the picked out interventions going to be effective?"**

3 Alcohol as a World Risk Factor

Alcohol is rooted in our culture from the very beginning of recorded history. Not only, that alcohol plays main role in alcohol-use disorders, but it is also linked as a component cause with more than 200 ICD-10 three digit disease codes (ICD-10 is the tenth version of International Statistical Classification of Diseases and Related Health Problems, medical classification issued by World Health Organization, which shows the seriousness and a height of alcohol risks and its contribution to global burden of disease (WHO, 1993). Most of the societies which actively drink alcohol, can feel related health and social problems which come with alcohol consumption (WHO, 2002). In 2004 3.8% of global deaths were attributable to alcohol. 6.3% for men and 1.1% for woman. The differences in sexes are indicated by differences in drinking habits. Where men drink more alcohol in more heavy drinking occasions and women are naturally lighter drinkers. Most of these deaths were caused by cancer, cardiovascular disease or liver cancer connected to drinking alcohol (Rehm *et al.,* 2009).

The worldwide mean consumption of alcohol is 6.2 liters of pure alcohol (100% ethanol) per adult per year. In all regions worldwide men consume more alcohol than women. However we should take in mind that most of the world adult population abstains from drinking alcohol and most of these people do so for their lifetime (Rehm *et al.*, 2009). With this in mind the alcohol is still a major risk for burden of diseases and countries estimated to spend more than 1% of their gross domestic product on costs attributable to alcohol only (Casswell & Thamarangsi, 2009). Alcohol has effect on our mental health and injury totally accounting for 4.6% of the global burden of diseases in 2004. When we divide this by gender, the global burden of diseases was in 2004 7.6% for men and 1.4% for women. Most of the deaths attributable to alcohol, occurred in people aged 15-29 (33.6% of early deaths) followed by age group 30-44 years (31.3%) and 45-59 age group with 22% of alcohol attributable deaths. Alcohol is shifting the alcohol-attributable disease burden towards younger population as oppose to traditional risk factors such as tobacco, cholesterol or hypertension (Rehm *et al.,* 2009).

However alcohol is not high on the global health agenda and no international policies are in place. This situation would be nowadays unthinkable and unimaginable for substances such as tobacco or illicit drugs. Even though alcohol is consumed for millennia in some parts of the world, the mass production of alcohol and its sophisticated marketing strategies formed by few large corporations with unlimited financial resources completely changed the way alcohol is served or used. Increased advertising, sponsorships and other forms of marketing through new electronic technologies make alcohol more relevant to young people, who create new demand power for these corporation. In unregulated environments of countries with growing economies rising alcohol market leads to a rise in alcohol-related harm. If these economies continue to expand, a change in social and cultural conditions and amplified marketing efforts are likely to lead to a rise in consumption, increasing alcohol-related harm worldwide (Casswell & Thamarangsi, 2009).

3.1 "Non-existent" Worldwide Alcohol Regulations

It is hard to set up the regulations as they cannot be in conflict with international treaties which should allow equal access to foreign imports. Some countries such as Thailand, France or Sweden were threatened by the organizations of suing them if they will take their regulations into force. Attention to trade treaties is an important part of policy development for alcohol control (WHO, 2007). No signs of need and support of international and national regulations from side of the corporation haven't been recognized yet. However the interest is now emerging in response to the need of sustainability and development. Holder of the alcohol policies within the United Nations system is the World Health Organization (WHO). But neither WHO nor UN agencies have paid much attention to alcohol and its regulation. Alcohol lacks coherent framework within the UN system for global control of alcohol related harm even though there is obvious need to put alcohol in line, next to tobacco and illicit drugs (Room, 2006).

3.2 Readiness for Action?

In September 2006, 37 countries endorsed regional strategy to reduce alcohol related harm. The strategy provides a framework for national action, where sectors such as education, finance, transportation and traffic play the key role. Member states requested WHO to provide technical support and collaboration with member states and with regional units. Whole strategy is standing on four core areas. Firstly involved countries want to reduce risk of harmful alcohol use by raising awareness and advocacy about alcohol related harm and regulate alcohol marketing. Secondly there should be established alcohol limit for driving with random breath testing. Third area affected should be the sales area. Where sales and taxation of alcohol should be regulated. The alcohol harm should be taken into account when negotiating international trade. And lastly there should be established mechanisms to facilitate and sustain implementation strategies. Nationally appropriate alcohol policies should be developed with regional mechanisms for individual support of every country (Casswell & Thamarangsi, 2009).

There are many positive signs of international refocus, but the change is needed particularly within the World Health Organization. An appropriate response would be the establishment of similar project to Tobacco Free Initiative which was able to focus international and regional attention on tobacco and gain the resources for action on tobacco epidemic. Also similar process was already taken with tobacco in the past. From this experiences governments can take the tolls which were proven to be working and don't have to spend money on those which didn't work in the first place. Governments also can feel how challenging this situation going to be, compared to tobacco industry before the Framework Convention Alliance for Tobacco Control (FCTC). There are calls within the nations for Framework Convention on Alcohol Control (FCAC).

Throughout all similarities in this case it is very important to acknowledge the differences between those two as well. Alcohol is more widely used and countries will probably not adopt a goal of abstinence but more likely the objectives of high income countries will focus on controlling the use of alcohol, raise the age of onset

drinking and reduce the frequency of intoxication as well as overall consumed volume of alcohol. There are some tools that are transferable from FCTC to FCAC such as price measures, advertising, communication, regulating product content, cessation, treatment and elimination of illicit trade. Some tools are only comparable within those two conventions. Packaging and labelling, liability of producers and sellers or controls on sale (hours of sale, density and location of places of sale and use). But the most challenging will be the alcohol specific measures such as drinking and driving legislation or protection of alcohol-control policies in negotiation of trade and economic agreements (Casswell & Thamarangsi, 2009).

Strong evidence exist for need of the effective response from the authorities. The alcohol burden and alcohol consumption will be increasing if any regulations wouldn't be taken into charge, especially in low income and developing countries. Drinking patterns have not been improved in years and the alcohol consumption is uncontrollably rising. Alcohol is linked to many disease categories such as cancer, liver cirrhosis or cardiovascular diseases which makes alcohol dangerous for economic as well as social fields (Rehm *et al.,* 2009). International law have to be used to achieve a forum for cooperation and negotiation (for instance FCAC) and the initial steps which already have been undertaken has to be scaled up to prevent alcohol related harm and reduce burden of disease from alcohol. Prevention should help to save human lives as well as government money, which seem as win-win situation for all (Casswell & Thamarangsi, 2009).

4 Australian Situation

4.1 Australian Drinking Habits and Patterns

Drinking of alcohol is deeply rooted in Australian society (Collins & Lapsley, 2008). Alcohol is used as a relaxant and socializing and celebrating tool as well as a source of employment and exports and generator of tax revenue (A. R. Moodie *et al.*, 2009). People in Australia find a reason for consuming alcohol in many occasions with different social and cultural contexts. They drink for sociability, cultural participation, and religious observance or as a result of peer influence. They also drink for pleasure, relaxation, mood alteration, enhanced creativity, intoxication, addiction, boredom, habit, to overcome inhibitions, to escape or forget or to 'drown sorrows' (NHMRC, 2009).

Most of the Australians are moderate regulate drinkers (Moodie *et al.*, 2009). The 2007 National Drug Strategy Household Survey showed that around 90% of Australians tried alcohol in their lifetime. Over 83% consumed alcohol in the past month, 8% drink daily and 41% have a drink at least once a week. On the other side of the spectrum around 10% of Australians never had full serve of alcohol and around 17% haven't consume alcohol in the past year (NHMRC, 2009). One in five Australians participate binge drinking (short term high risky level of drinking) or party at least once a month, which results into more than 42 million occasions of binge drinking in Australia every year (Moodie *et al.,* 2009).

Over the past two decades the average volume of consumed alcohol per person remained almost stable (NHMRC, 2009). Chikritzhs *et al* (2011) in their study considered some other trends with adjusted series of annual totals of per capita consumption (PCC) and proved that the new trend of volume of alcohol consumption is rising while according to the old trend the alcohol consumption remained unchanged. According to Chikritzhs and his team (2011) the levels of PCC of alcohol were underestimated and led to the mistaken impression that the PCC of alcohol is at the same level as in the early 1990's, when in reality the alcohol consumption is increasing with each year. The old (stable) trend of PCC of alcohol

was around 9.8 liters per year. By a agreeing with the new PCC of alcohol trend results the consumption rose from 9.8 liters per year up to 10.2 liters per capita per year. This new information is consistent with increasing alcohol related harm and burden of diseases related to alcohol in Australia. As a cause of this increase he is pointing out the gradual increase of alcohol content in drinks and increasing market share of wine industry.

While according to Australian government the alcohol consumption per capita per year almost did not changed, they admit that the trends in drinking and consuming alcohol changed over the years the most. Preferences in beverage type has shifted to spirits and pre-mixed drinks especially among the young Australians. Also the level of informal drinking has risen together with informal drinking styles such as drinking directly from the container (NHMRC, 2009).

Harmful use of alcohol affects wide range of people, regardless of race, education, cultural background, age, religion or other demographic indicators. Reasons for drinking on harmful levels are complex and always varied, depending on situation (NHMRC, 2009). Australian communities are becoming more and more aware to the harm related to consuming alcohol (Moodie *et al.,* 2009). In the 2007 National Drug Strategy Household Survey (AIHW 2008) 48% of Australians reported drinking under guide line levels for short-term harm, while 35% of people drank above those guidelines at least at one occasion in last 12 months.[1] 10% reported drinking above guideline levels while 72% reported drinking at or below these levels for long-term harm. For children and young adults alcohol is no stranger either. By the age 14, 90% of minors had tried alcohol. At the age 17, 70% consumed alcohol the month before the survey. Consumption of alcohol a week before the survey varied depending on age. From 9% of 12 year old to a peak of 50% among 17 year olds. Rates of drinking above recommended guidelines are very similar to rates for general population with 9% of drinking above the long-term harm levels and 39% above the short-term harm levels (NHMRC, 2009).

[1] Australian guidelines are labeling the risk that occurred immediately after consuming alcohol as 'short-term harm' while the risk from regular drinking over the lifetime which can lead to developing alcohol related disease was labelled as 'long-term harm'.

The preferred types of alcohol for female drinkers are (in sloping order): bottled wine, bottled spirits and liqueurs, ready to drink beverages (RTDs) in bottle and RTDs in a can. The highest increase in popularity over the years among women has bottled wine, growing from 57.3% to 63.8%. Males prefer to drink (in sloping order): full strength beer, bottled wine, bottled spirits and liqueurs and RTDs in a can. The preference for RTDs in can had the greatest increase among males growing from 18.2% to 24.3% (Moodie *et al.*, 2009).

4.2 Australian Standard Drink

The notion of 'standard drink' is used in many countries internationally. However not in every country it has the same meaning. That is why the term 'Australian Standard Drink' had to be applied. Australian Standard drink contains 10g of alcohol which is equivalent to 12, 5 milliliters of pure alcohol in a drink. In most situations one Australian standard drink is less than usual serving size of an alcoholic beverage. For instance one Australian standard drink corresponds to 100 milliliters of wine, while standard serving size is 150 milliliters. Other equivalents of 1 Australian standard drinks for the most common alcoholic beverages are for example 1 can of mid-strength beer (3.5% alcohol) or 30 milliliters of spirit-1 nib (37%-40% alcohol). For more details on how the standard drink looks like see table no.1 (NHMRC, 2009).

Tab. 1 Numbers of Australian standard drinks in common containers of various alcoholic beverages

Type Of Beverage	Number of Australian Standard Drinks
Beer	
Low strength beer (2.7% alcohol); 1 can	0.8
Mid strength beer (3.5% alcohol); 1 can	1
Full strength beer (4.9% alcohol); 1 can	1.4
Wine (9.5-13%)	
100ml Glass	1
150ml Glass	1.4-1.6
750ml bottle	7-8
Spirits (37% - 40%)	
1 nip (30ml)	1
700 ml Bottle	22
RTDs	
1 can (375ml)	1.5-2.1
1 bottle (275ml)	1.1-1.5

Source: *Australian Guidelines to Reduce Health Risks from Drinking Alcohol*, 2009

Australian government guidelines are stating that: “For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.” and that, "For healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion” (NHMRC, 2009).

4.3 Alcohol Campaigns and Actions taken in Australia

Australia Government and the states territories are working together through mechanisms of the Ministerial Council on Drug Strategy to implement initiatives to prevent alcohol-related harm. They take it as a responsibility shared among all levels of government (MCDS, 2006). At the state and territory level there are huge key actions such as alcohol policies and programs including licensing, law

enforcement and drug education. However local governments play big role in this issue as well. They can contribute by managing physical availability of alcohol and creating safer drinking settings along with support of community wellbeing (Handfield, 2005).

There is also quite a big amount of community-based activities which are preventing alcohol-related harm. The level of these community-level action is significant and is important addition to state and local government policies and programs. Overall there is a mood in Australia to address the negative side of alcohol use (Moodie *et al.*, 2009).

4.3.1 National Binge Drinking Strategy (NBDS)

Action of Australian Government to reduce binge drinking especially popular among young Australians. Web page with online campaign has been set up, to help young people with binge drinking, inform them about risks of binge drinking and to provide important contacts if they find themselves in need of help (Australian National Preventive Health Agency, 2014).

Binge Drinking Strategy was announced on March 28th 2008 by the Prime Minister (Moodie *et al.*, 2009). The goals of this strategy are to increase the awareness of the short-term and long-term harms the overuse of alcohol can bring overtime. Australian Department of Health was responsible for funding the first two phases (phase one from 2008-2009 and phase two, from 2011-2012) of NBDS. Thanks to this founding number of projects could be undertaken. Including the advertising campaign that confronted young people with the risks and consequences of binge drinking called 'Don't turn a Night Out into a Nightmare' (DOH, 2014).

4.3.2 The Right Mix

The Right Mix is an interactive online resource under the Department of Veterans' Affairs of the Australian Government. It urge its users to find 'the right mix' between their health and use of alcohol. It also providing number of tips how to drink at low risks and maintain healthy lifestyle (DVA, 2003).

4.3.3 National Drug Strategy

The latest National Drug Strategy was released in 2011. This strategy is reflecting the aims and commitments for the upcoming years until 2015. The goal of the National Drug Strategy 2010-2015 is to build safe and healthy communities by minimizing alcohol, tobacco and other drug-related health, social and economic harms among individuals, families and communities (MCDS, 2011).
The strategy focus on three main pillars. *Pillar 1:* Demand reduction, *Pillar 2:* Supply reduction and *Pillar 3:* Harm reduction.

Pillar 1 includes strategies to prevent the uptake of drug use, delay their first use and reduce the misuse of alcohol. This includes education of consumers for example throughout school programs or public awareness campaigns. Flexible strategies and actions are necessary for this pillar to be effective since there is no one strategy that can prevent and reduce the demand for drugs. Demand reduction requires the cooperation and participation of diverse range of sectors and development of links among these sectors (MCDS, 2011).

Second pillar deals with supply reduction of drugs. The actions necessary to take are including the prevention of the importation of illegal drugs and controlling the chemicals in their manufacture. Strengthen collaboration between law enforcement industry and relevant agencies. The engagement of Australian communities and their support for these strategies is important as well as the collaborative participation of all levels of government including law enforcement and the public and private health sector. This actions should send clear message that he supply and use of illegal drugs and the illegal supply of tobacco, alcohol and other legal and illegal drugs is not acceptable

Focus in the third pillar is aimed on the harm reduction. In relation to alcohol the key harm-related approach for really long period is to prevent drink and driving and reduce road accidents related to this problem. Another aim is to reduce public violence connected with overuse of alcohol. Support from government comes through liquor licensing, responsible service of alcohol (RSA), education programs, interventions and family support services (Ibid).

4.3.4 Australian Guidelines to Reduce Health Risks from Drinking Alcohol

The National Health and Medical Research Council (NHMRC) published these guidelines as a base of evidence for future policies and community materials to reduce the health risks that arise from drinking alcohol. There are four guidelines in total which take into consideration a healthy men and women and their drinking limits to reduce long term as well as short term risks of alcohol related harm, young people and their parents and pregnant women or women planning a pregnancy. For overview of these guidelines please see the table 2 below (NHMRC, 2009).

Tab. 2 Australian Guidelines to Reduce Health Risks from Drinking Alcohol

Guideline no.	**Guideline content**
Guideline 1:	"For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury."
Guideline 2	"For healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol related injury arising from that occasion."
Guideline 3	A: "Parents and carers should be advised that children under 15 years of age are at the greatest risk of harm from drinking and that for this age group, not drinking alcohol is especially important." B: "For young people aged 15-17 years the safest option is to delay the initiation of drinking for as long as possible."
Guideline 4	A: "For women who are pregnant or planning a pregnancy, not drinking is the safest option." B: "For women who are breastfeeding, not drinking is the safest option."

Source: *Australian Guidelines to Reduce Health Risks from Drinking Alcohol*, 2009

5 Australian Alcohol Legislation

Legislation is one of many tools connected with reducing alcohol-related harm and burden of diseases (Crombie *et al.*, 2007). Australia has three tiered system including the Australian Government, eight states and territories (ACT, NSW, NT, QLD, SA, TAS, VIC and WA) and 560 local governments and councils. However in Australia the liquor legislation is developed in each state territory independently, due to significant geographic, climatic, demographic and historic differences among the territories. Valid legislation for each Australian state is shown in table no.3. The Liquor legislation in most of the territories also contains restrictions on places where alcohol can be consumed as well as who can consume alcohol (Trifonoff *et al.,* 2011b).

Tab. 3 Valid Australian legislation for each Australian territory

ACT	Liquor Act 2010
NSW	Liquor Act 2007
NT	Liquor Act; Northern Territory Licensing Commission Act
QLD	Liquor Act 1992
SA	Liquor Licensing Act 1997
TAS	Liquor Licensing Act 1990
VIC	Liquor Control Reform Act 1998
WA	Liquor Control Act 1988

Source: Trifonoff *et al.*, 2011c

Every legislation comprehend the objectives of these legislations. These objectives are very similar for all the states including:

- regulation of the sale, supply, and consumption of alcohol,
- continued development and sustainability of the liquor industry, live music, entertainment, tourism, hospitality and adult entertainment,
- provide a flexible, practical, informal and untechnical regulatory scheme
- secure revenues for the state.

In order to achieve these objectives all legislations contain statutory provisions regulating:

- Who could sell and supply alcohol,
- the commercial practices of licensed premises,
- offences and duties of licensees,
- disciplinary procedures and penalties,
- who could consume and access alcohol, and

where alcohol could/could not be consumed and/or possessed (Ibid).

5.1 Alcohol Licensing Legislation

Alcohol licensing legislation controls the sale and supply of the alcohol. Each territory or state has its own jurisdiction about liquor, containing the complete overview of the alcohol licenses and the necessary acts to gain these licenses for businesses (Trifonoff *et al.,* 2011b).

There are many ways how to minimize the alcohol-related harm through liquor licensing and liquor licensing acts. Actions taken by each territory are described in table number 4.

Tab. 4 Examples of harm minimization features of liquor licensing legislation

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Legislated harm minimization objectives	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Liquor accords	No	Yes	Yes	Yes	Yes	No	Yes	Yes
Mandatory RSA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Venue management training	No	No	Must complete a Liquor Act test	Yes	Yes	No	Yes (new licensee's only)	Yes
Lockouts	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Barring orders	No	No	Yes	No	Yes	Yes	No	Yes
Banning notices	No	Yes	Prohibition order	Civil banning orders	No	No	Yes	Prohibition orders
Risk-based fee structure	Yes	No	No	Yes	No	No	Yes	No

Source: Roche & Steenson (2011)

5.1.1 Australian Capital Territory

Alcohol licensing of Australian Capital Territory is stated in the Liquor Act 2010. There are five license categories with several sub-licenses in some of them. Division of these licenses is as follows: a *general license*, an *on-license* (further divided into *bar license, night club license* and *restaurant and café license*), *off-license*, a *club license* and a *special license* (Trifonoff *et al.,* 2011a).

A *General License* authorize licensee or permit holder to sell liquor in open containers for on-premise consumption and in sealed containers for off-premise consumption. The license may have different licensed times for on-premise and off-premise sales.

On-License holder is authorized to sell liquor in open containers for consumption on the premises at the licensed time. Three types of *on-licenses* are detected. *Bar license* for premises that are a bar, means where the predominant activity at the licensed time is to serve the alcohol for consumption. *Nightclub license* is issued to premises where the predominant activity at the licensed time is dancing and entertainment. And the *restaurant and café licence* where the predominant activity at the licensed times was the serving of meals for consumption on the premises.

Off license authorize licensee to sale liquor in sealed containers for the off-premise consumption at licensed time.

Club Licenses authorize the sale of liquor for on-premise and off premise consumption. Liquor can be sold only to club members and their guests, or anyone else authorized by the club to be at the club.

Special License authorize the licensee to sell alcohol on single premise at the licensed time (ACTPC, 2014).

Trading hours in ACT are separated into 2 categories. On-premise consummation and off-premise consummation. The standard trading hours for the on-premise licenses are 7am until midnight and 7 am until 1 am the following day, late night licensed times are until 2 am and extended late night licensed times until 4 am or 5 am the following day. Standard trading hours for off-premise consumption

are from 7 am until midnight and can be extended until 4 am (ACTPC Office, 2013).

5.1.2 New South Wales

In New South Wales the Liquor Act 2007 is addressing the issue of alcohol licensing on juridical level. In this Australian Territory there are 6 liquor licenses (*Club, Hote*l- including a *general bar licence*, *Limited, On-premises, Packaged liquor and Producer/wholesaler licence*). All of them are associated with fees from 40 dollars fee for a single function licence to 1500 dollars for packaged liquor licence. Most types of licenses needs to be accompanied by a Community Impact Statement- it allows to Casino, Liquor and Gaming Control (CLGCA) to be aware of the impact that granting and application would have on local community (Trifonoff *et al.*, 2011a).

Club licence authorizes the licensee to sell alcohol to a members of a club or their guests for consumption on and off licensed premises.

Hotel licence (Including General Bar Licence) allows alcohol to be sold to the public for consumption on and off the licensed premises. This licence is subjected to various regulatory controls such as: these facilities have to be open to public (not run as a private club), there has to be free drinking water available to customers whenever alcohol is served, sign with name of premises and licence type have to me hang on the front door of the premises and incident register have to be maintained if the facility has trading hours after midnight. A *general bar licence* is a limited type of *hotel licence* which allows alcohol consumption on the licensed premises but does not allow take-away sales.

Limited Licence allows alcohol to be sold at functions hold by non-profit organizations as well as events and special trades. There is a multifunction as well as single function licence, where function is defined as dinner, ball, convention, seminar, sporting event, race meeting, exhibition, performance, trade fair, carnival or any other activity intended to raise funds for charitable purposes. Alcohol sold at these functions have to be served in open containers and have to be consumed at the event only.

On-premises licence allows alcohol to be served with another product or service. With this licence alcohol have to be consumed on the premises only. On-premises

licence is relevant to settings such as restaurants, cafés, places providing accommodation, nightclubs, airports etc.

Packed Liquor Licence allows the licensee to sell alcohol trough bottle shops, delivery, mail order or the internet. Packed liquor can be sold only for consumption off the premises. This licence cannot be granted to general stores, service stations or take-away food outlets.

Produce/Wholesaler Licence applies to wine producers, brewers, distillers and other types of wholesalers. This licence allows these wholesalers to sell alcohol to other liquor licenses (OLGR, 2015).

There is six hour closure applied to all liquor licenses from 30th October 2008. This closure requires the venues to stop the sale for 6 hours, usually from 3 am to 9 am (Trifonoff *et al.*, 2011a).There is 3 am 'lock out' ordered in CBD Sydney Entertainment Area (Ibid.).

5.1.3 Northern Territory

Situation for the Northern Territory is little bit different since almost 30% of population is formed by aboriginals and two thirds of the indigenous population lives in very remote areas. Therefore the Northern Territory Liquor Act contain only two licence types. There is a general authorization and the other special licence. Both are always issued via Commissioner that permit the applicant to sell liquor. Prior to issuing the licence the commissioner is required to consider the public interest criteria. (Trifonoff *et al.,* 2011a; NTA, 2015).

5.1.4 Queensland

Queensland has variety of licences and permits. The primary difference between permit and licence is whether they are commercially or community based (Trifonoff *et al.,* 2011a).

Commercial Hotel Licence authorized the sale of alcohol on and off premises. The business is required to have specific facilities to gain this licence. A commercial kitchen, function room facility or accommodation of at least 3 rooms

or dinning, restaurant or bistro style facility, the capacity to seat more than 60 persons, separated toilet facilities for men and women.

Commercial Special Facility Licence is authorizing the licensee to sale liquor for on and off premises consumption in accordance with the Liquor Act 1992 or conditions imposed by the OLGR Chief Executive. If the sale is happening outside of trading hours than consumption can only occur in the resident's unit. The Chief Executive is not empowered to grant this licence unless he is satisfied that the business is compliant with the principal activity.

Commercial other licence has five sub-categories corresponding with the principal activity of the business. There are *Subsidiary on-premise licence, Subsidiary off premise licence, bar licence*- only authorized to sell alcohol for on-premise consumption, *Industrial canteen licence*- authorized to sale the alcohol on remote industrial localities, this licence can be obtained only in locations where no permanent residential population and *Producer / wholesale licences* is issued.

Community Club Licence is allowing to sell alcohol to a club members or their guests for on and off-premises consumption. The Chief Executive could approve the licence to be extended on other premises owned by the club for infrequent events.

Community Other Licence is allowing to businesses to serve alcohol only to a club members and their guests, to reciprocal club members and their guests and must be operated for less than 25 hours a week. The club have to be a non-proprietary club to gain this licence (QPC, 2014).

5.1.5 South Australia

South Australia has 11 different types of licences where every licence is disposing with different operating hours. These licences can be easily separated into six groups. Licences which permit sale of alcohol on and off-premises, licences for only on-premise consumption, packed liquor licences, club licences, wholesalers' licences and limited licences (Trifonoff *et al.*, 2011a).

Several types of on and off-premise licences is permitted in South Australia. Including *Hotel licence* who authorize the licensees to sell alcohol at any time to residents, diners consuming a meal in dining area and people attending a function on the premise. *Residential licences* works very similarly as *hotel licences*, where *hotel licence* has the right to sell liquor through direct sales in their operating hours and the delivery address has to be interstate (GSA, 2015).

5.1.6 Tasmania

Tasmania have five categories of liquor licenses (Trifonoff *et al.*, 2011a). There is a *general licence* authorizing the sale of liquor for consumption on and off premises between 5 am and midnight on any day (GTLGB, 2013).

On licence authorize the sale of alcohol between 5 am and midnight on any day for consumption on the premises. While on the other hand, holder of the off licence can sell the alcohol between 5am and midnight on any day on the premises, for consumption off those premises. *Club licence* can serve liquor for on and off premises consumption to members and their visitors of the club. As last we have a *special licence* which subject to compliance with condition specified in the licence (Ibid). Tasmania also has four liquor permits categories. Permit of this kind can be obtained by any applicant who is at least 18 years old and have satisfied the Commissioner of their ability to exercise effective control over the sale and consumption of liquor on the premises (Trifonoff *et al.,* 2011a).

An *out of hours permit* which authorize the sale of liquor after midnight and before 5 am. An *on permit* authorizes the sale of liquor on permit in the places with *off premise licences*. In opposite way acts *off permit* which authorize the sale of liquor on the premises with on licence. *A special permit* authorize the sale of liquor on the premises between times and subject to compliance with any condition specified in the permit (GTLGB, 2013).

5.1.7 Victoria

Victoria has eleven categories of licences and/or permits issued under the Victorian Liquor Control Reform Act from 1998. These licenses and permits mainly specify the trading hours within witch licensed premises can operate (Trifonoff *et al*., 2011a).

Those licenses are: *general licence*, *on-premises licence, restaurant and café licence, club licence, packaged liquor licence, late night licence, pre-retail licence, vigneron's licence, limited licence, major event licence and Bring Your Own (BYO) alcohol permit* (VCGLR, 2011).

Temporary licenses in Victoria have two types. *Temporary limited licence* and *major event licence*. Temporary limited licence are usually hold by persons or businesses holding one-off event such as a ball or presentation night or a one-off event which is requiring and extension of trading hours. A major event licence is aimed to events which are likely to have a significant impact on Victorian community. Events which require significant regulatory enforcement effort or oversight and/or have a significant impact on the provision of public transportation or emergency services and/or are likely to have impact on public safety (Trifonoff *et al.,* 2011a; VCGLR, 2011).

5.1.8 Western Australia

Western Australia has nine different licence types. *Hotel licence, night club licence, casino liquor licence, special facility licence, club or club restricted licence, restaurant licence, producer's licence, wholesaler's licence and occasional licence* (Trifonoff *et al.*, 2011a).

Hotel licence contains sub categories such as *small bar licence*, *tavern licence* and *hotel restricted licence*. *Small bar licence* has a limit of 120 patrons on the premise. The permitted trading hours for this licence are 6 am till midnight from Monday to Saturday and 10 am – 10 pm on Sunday. Certain restrictions occur on New Year's Eve, Good Friday, Christmas Day and ANZAC Day.[2] *Night Club licensees*

[2] "Anzac Day" – 25 April – is one of Australia's most important national occasions. It marks the anniversary of the first major military action fought by Australian and New Zealand forces during the First World War" (Australian War Memorial, 2015).

have a permission to sell alcohol between 6 pm and 5 am Monday to Thursday, 6 pm till 6 am on Friday and Saturday and 8 pm to midnight on Sunday. All the other types of licenses have special restrictions on ANZAC Day. For example restaurant licence permits to serve alcohol anytime other than between 3 am and 12 pm on this day (DRGL, 2013).

6 Alcohol Policy Interventions

A panel of alcohol research experts was established to assist in selecting alcohol interventions for cost effectiveness analysis. From list of fifty interventions they narrowed it down to 13 interventions based on their efficiency and political situation in Australia. Following 7 interventions had been chosen as the most effective package of interventions: Volumetric taxation, Advertising Bans, Licensing controls to restrict operating hours, Brief interventions, RBT, Increase in minimum legal age and Mass media drink and driving campaigns (Cobiac *et al.*, 2009). While some interventions are more effective that others there is no quick fix to the prevention of harmful consumption of alcohol (Moodie *et al.,* 2009).

6.1 Minimum Legal Drinking Age

The minimum legal drinking age (MLDA) is one of the two most evaluated alcohol control policies, followed by excise taxes, of all times. Over 120 studies has been done on this topic. As an outcome of these studies have been found that increase of the MLDA can reduce youth drinking and alcohol-related harm. Some effectiveness of this policy was connected also with reducing the road traffic accidents (Wagenaar & Toomey, 2000). Effectiveness study done by Anderson *et al.* (2009) evaluated this intervention as effective.

The MLDA is set in all states and territories of Australia at the same age-18 years old (Trifonoff *et al.,* 2011b). However there have been speculations on increasing this age level up to 21 years old for purchasing or consuming alcohol in public through legislation and enforcement (Doran et al, 2010). Study done by Cobiac *et al.* (2009) showed that by applying this intervention in Australia on chosen target group of 100% of population (drivers) aged 18-20 years old would have mean effect of reducing road traffic accidents by 13%. Cost of this intervention would be around AUD 0.64 million. In terms of cost-effectiveness, the probability of setting the MLDA would be cost-saving around 61%. The probability for this intervention to be less than AUD 50 000 dollars per disability-adjusted life year (DALY) is 100%, from which we can conclude that the intervention of adjusting MLDA from 18 to age

21 would be effective as well as cost-effective for the society as well as the government (Cobiac *et al.,* 2009).

6.2 Volumetric Taxation

There is a strong and significant evidence that increase in price of alcohol will lead to overall reduction in alcohol consumption per capita (ANPHA, 2012). Volumetric taxation is based on principle that the alcoholic beverages will be taxed according to the percentage of alcohol included in the beverage. Current taxation and excise system subjects alcohol to four different types of tax instruments. GST (Goods and Services Tax) is applied as a flat rate of 10% to all goods and services. Custom duties which are applied only to imported alcohol. Excise duties which are collected per every liter of alcohol content in beverage. This rate is different for every kind of beverage like spirits or beer, but does not include wine. For wine there is special tax applied called Wine Equalisation Tax (WET). WET is based on value of 29% from the wholesale price of wine (Rooy, 2014).

Slight change in taxation system occurred, when in 2008 "alcopop"[3] tax has been introduce by Australian Government. After release of the Australian Bureau of Statistics from years 2004-2009 estimates confirmed that the alcopops tax reduced consumption of alcopops. Although consumption of spirits increased, the change was not high enough to offset the reduction in alcopops drinking. Result of the alcopop tax was a 2% reduction in alcohol consumption per head. This was a first decrease in Australia in last 4 years. However partial substitution of other alcoholic beverages for alcopops indicated the need for more comprehensive reform of alcohol taxation (Hall & Chikritzhs, 2011).

Current system applies 8 different rates of excise taxes on beer and spirits. As the result we can see huge price variety for one standard drink. There are still some positive outcomes from current taxation system. While spirits are under higher taxation rates because of their high alcohol content, low strength beers can enjoy

[3] Alcopops - also known as RTD (Ready to Drink), are spirit based alcoholic beverages (Skov *et al.*, 2011).

tax discounts. That makes an economic encouragement for breweries to produce and consumers to choose low alcoholic beverage rather than spirits with high alcohol content. However WET is not as suitable for reducing alcohol-related harm (Ibid.)

Biggest issue with WET is that wine is taxed based on its price. So cheap and luxurious wine with same alcohol content are under different taxation levels (ACG, 2011). This has resulted to production of huge casks of cheap wine which is stronger than regular beer (Rooy, 2014). Without any surprise there are concerns that such a cheap alcohol will contribute to the burden of disease related to alcohol especially among young people or among those Indigenous Australians who drink at harmful levels (Moodie *et al.,* 2009). Replacing WET with volumetric taxation would mean that wine will become more expensive and therefore the drop in alcohol consumption by 2.6% will occur (ACG, 2011). However some concerns occurred among Australia, because reduced consumption of beer and wine could lead to increase in consumption of spirits (Byrnes *et al.,* 2008).

Some studies suggesting to set a minimum price per standard drink (or alcohol unit) below which alcohol could not be legally retailed along with volumetric taxation. Such a system would prevent applying discounts on alcohol beverages to encourage consumption (Gruenewald & Johnson, 2010). In 2012 Australian government requested from ANPHA to examine the public interest in case of minimum alcohol price. In the report ANPHA recommended that a minimum pricing should be considered only in local circumstances and should not be applied on national level. Also fully privatized Australian alcohol industry would not benefit from this change. Unlike in Canada where the monopoly government suppliers recoup the revenue, Australian alcohol industry benefits from increased revenues (ANPHA, 2012). In case of Canada it was proven that population level of drinking is significantly reduced by increases in minimum price (Stockwell *et al*., 2012). Carraagher and Chalmers (2011) suggesting in their book that minimum price for alcohol and volumetric taxation are best conceptualized as complements, rather than alternatives to each other.

Study done by Doran *et al*. (2005) examined the effectiveness of a set of alcohol policy interventions and found out that volumetric taxation is the one with lowest costs but highest benefits in terms of DAILY's. Team of Byrnes and his colleagues (2008) recognized this intervention as "important in efficiently reducing the harm caused by alcohol use". Volumetric taxation is cost-effective policy that will deliver significant health benefits compared to existing Australian taxation system (Ibid.).

6.3 Advertising Bans

Advertising bans are one of the population wide interventions which are more equitable than targeted interventions such as brief interventions which rely on general practitioner who needs to be prepared to deliver the information (Doran *et al*., 2010). Attention of alcohol advertising and exposure is highly focused on adolescents and younger people (Casswell, 2012). Alcohol advertising is 128 million dollars business in Australia. The main outlets by which exposure occurs are television advertising (38%) and outdoor advertising (32%). Tobacco advertising have been banned in Australia in 1995. However there are no alcohol advertising bans in Australia. Restrictions and advertising content controls do apply. There have been spoken some concerns from the side of Ministerial Council on Drug Strategy about current complain system. They think that current system does not address public health concerns about alcohol advertising and use. The current complains system may discourage people from making complaints about alcohol advertisements and the public is generally unaware of the complaint system. The current system does not apply to all forms of advertising such as packaging, electronic advertising or point of sale advertising and promotions (Moodie *et al*., 2009).

In Australia two industry self-regulations codes apply to alcohol advertising. Australian Association of National Advertisers (AANA) developed the advertiser's Code of Ethic which applies to all advertisements and deals with their taste and decency. As addition to Code of Ethic AANA issued the Alcoholic Beverage Advertising Code specifically designed to be used by the alcohol industry (Jones *et al*., 2008).

Tab. 5 The Alcohol Beverages Advertising Code

(a) Must present a mature, balanced and responsible approach to the consumption of alcohol beverages and, accordingly– **(i)** must not encourage excessive consumption or abuse of alcohol **(ii)** must not encourage under-age drinking **(iii)** must not promote offensive behavior, or the excessive consumption, misuse or abuse of alcohol beverages **(iv)** must only depict the responsible and moderate consumption of alcohol beverages
(b) Must not have a strong or evident appeal to children or adolescents and, accordingly – **(i)** adults appearing in advertisements must be over 25 years of age and be clearly depicted as adults **(ii)** children and adolescents may only appear in advertisements in natural situations (e.g. family barbecue, licensed family restaurant) and where there is no implication that the depicted children and adolescents will consume or serve alcohol beverages **(iii)** adults under the age of 25 years may only appear as part of a natural crowd or background scene
(c) Must not suggest that the consumption or presence of alcohol beverages may create or contribute to a significant change in mood or environment and, accordingly – **(i)** must not depict the consumption or presence of alcohol beverages as a cause of or contributing to the achievement of personal, business, social, sporting, sexual or other success **(ii)** if alcohol beverages are depicted as part of a celebration, must not imply or suggest that the beverage was a cause of or contributed to success or achievement **(iii)** must not suggest that the consumption of alcohol beverages offers any therapeutic benefit or is a necessary aid to relaxation
(d) Must not depict any direct association between the consumption of alcohol beverages, other than low-alcohol beverages, and the operation of a motor vehicle, boat or aircraft or the engagement in any sport (including swimming and water sports) or potentially hazardous activity and, accordingly – **(i)** any depiction of the consumption of alcohol beverages in connection with the above activities must not be represented as having taken place before or during engagement of the activity in question and must in all cases portray safe practices **(ii)** any claim concerning safe consumption of low-alcohol beverages must be demonstrably accurate
(e) Must not challenge or dare people to drink or sample a particular alcohol beverage, other than low-alcohol beverages, and must not contain any inducement to prefer an alcohol beverage because of its higher alcohol content

Source: Jones *et al*., 2008

Studies that are connecting the exposure to alcohol advertising and alcohol consumption has been done. Jones and Magee (2011) focused their study on the alcohol advertising exposure among Australian adolescents. In their study they took into consideration exposure to eight media channels: television, magazine, newspaper, internet, billboard, bottle shops, bars, and promotional materials. They found out that exposure to some of these types of alcohol advertisement among young adolescents are associated with increased alcohol consumption and some of

them are associated with alcohol initiation as well. In contrast among younger and older males and younger females none of the advertising media was associated with alcohol initiation. Results of this study are consistent with studies done overseas and suggest that exposure to alcohol advertisement in variety of media and forms is strongly associated with drinking patterns. Policy makers therefore need to develop ways to minimize this exposure, since over 94% of the most vulnerable group (adolescents) have been exposed to alcohol advertising, in order to reduce its impacts on drinking patters and attitudes.

Anderson *et al*. (2009) evaluated this intervention as effective based on study review of 13 longitudinal studies done in 2009. Twelve out of thirteen studies founded evidence that exposure to alcohol advertising predicts on set drinking of non-drinkers and increased level of drinking among existing drinkers. This study is concluding that exposure to alcohol advertising is associated with likelihood that adolescents will star drink or will increase alcohol consumption if they are drinking already (Anderson, De Bruijn *et al*, 2009; Anderson *et al*., 2009). On 85% probability of being cost-saving advertising bans are the second most cost effective intervention (Cobiac *et al*., 2009).

6.4 Brief Interventions

Brief interventions are targeted mainly on heavy drinkers and people with addiction to alcohol consumption, they should motivate those at risk to change their behavior. A brief intervention can take from 5 minute advice to 30 minutes of brief consulting (MCDS, 2011).Those interventions involve direct contact between alcohol user and health care professional, usually general practitioners and alcohol or other drug workers, but can also be used by other service providers, police officers, nurses or family members (Cobiac *et al*., 2009). However a preventative brief intervention can be delivered through workspace or community (Loxley *et al*., 2004). While those interventions are mainly focused on individuals there are some possibilities how to spread this intervention throughout whole public such as raising public awareness of alcohol problems or involving health care professionals in advocacy for prevention of alcohol use. This intervention is considered as a key ingredient

especially for the early stages of risky drinking (Moodie *et al*., 2009). In Australia the potential of brief interventions is yet to be explored, because the role of primary workforce is still waiting to be recognized (Loxley *et al*., 2005).

There was noted positive effect and effectiveness of brief interventions on hazardous and harmful alcohol consumption, mortality, morbidity, alcohol-related injuries, alcohol related social consequences (Kaner *et al*., 2009). Also studies review of 12 studies has been done that noted that combination of educational and office support programs increased rates of advice giving health care providers from 32% to 45% (Anderson *et al*., 2004). However, Cobiac *et al*. (2009) found out that probability of being cost-saving is 0%. This intervention hasn't been found out cost effective but effective enough to be included in the package of recommended interventions.

6.5 Measures to reduce drink and driving

In Australia, there is a high rate of road accidents connected with alcohol. In research done by Chikritzhs and her team (2000) between 1990 and 1997 they found out that 31% of driver and pedestrian deaths were alcohol related. While average age for alcohol related road injuries was 27.5 years, the average age for non-alcohol related road injuries was above 37 years of age. From this research we can conclude that younger drivers are more likely to drive under influence and that support for random breath testing should be high to lower the amount of road deaths and injuries.

Current Australian drink and drive policy is set on 0.05 blood alcohol concentration (BAC) which is backed by RBT controls. It is suggested by researchers to lower the BAC in order to accomplish the reduction of the social costs of alcohol-attributable road accidents (Collins & Lapsley, 2008). In table number 5 we can see the effectiveness and cost effectiveness of each drink and driving countermeasure.

Since the problem group in the drink and driving issue is mainly the young adult group, there has been a discussion to raise the minimum age as a prevention. This prevention has been shown as very effective in some states of USA and has been recently introduced in New Zealand as well. However this intervention would

influence everybody, not just offenders (Loxley *et al*., 2005). On the other side measures such as implemented random breath testing or low blood alcohol levels for drivers are very effective in saving lives on the roads and are highly publicly acceptable in countries they were implemented. According to McKnight the drink and driving campaigns have been found effective in general in influencing the knowledge and attitudes among drivers. The down side of this is that they are not influencing the drink and driving offenders who are targeted in such campaigns very rarely. The drink and driving campaigns and interventions are usually taken very well by communities, considering how serious the potential harms to all road users are (McKnight & Voas, 2004).

The long-term study done in early 1990's in four Australian states showed, that random breath testing had a very casual permanent effect on alcohol-related incidents. This study also recommends that all states should have stationary RBT controls to an equivalent of one test per one driving licence holder (Henstridge, Homel *et al*., 1997). Random breath testing is one of the most costly interventions, due to the need of regular sobriety checkpoints administrated by police, together with brief interventions (Moodie *et al*., 2009).

Tab. 6 Effectiveness ratings for drink and driving countermeasures

	Effectiveness	**Cost efficiency**
Lowered BAC levels	**+++**	**+++**
RBT	**+++**	**+**
Licence suspension	**+++**	**++**
Community programs	**++**	**+**

Source: Anderson & Baumberg, 2006

Tab. 7 Effectiveness ratings

	Effectiveness	Cost Efficiency
+	Limited effectiveness	Relatively high cost to implement and sustain
++	Moderate effectiveness	Moderate cost to implement and sustain
+++	High degree of effectiveness	Low cost to implement and sustain

Source: Anderson & Baumberg, 2006

7 Conclusions

Alcohol is a serious issue for today's global health and economy. Actions similar to tobacco issue taken almost twenty years ago should be taken with alcohol in this decade. Cardiovascular diseases, cancer or high blood pressure are serious diseases often connected with alcohol use. Without taking any action and educating the populations about alcohol related harms the burden of diseases connected to alcohol will be only rising.

Australia is on a good way to raise the alarms about alcohol use in Australian population. Decrease the alcohol consumption and the economic impact of alcohol burden of diseases. With their strategies and government guidelines Australia knows its goals and already has set up a way how to achieve them. In my opinion Australia has very good potential to get healthier population by year 2020 as they wish to.

Chosen interventions have been found effective by most of the researched studies. While making alcohol less available and more expensive are very cost-efficient interventions school based education does not reduce alcohol related harm. On the other hand public information and education types of programs are raising awareness of the public towards alcohol related harms. As the most expensive interventions were founded brief interventions and random breath testing. However, their efficiency is still keep them included in the recommended package.

Overall, I think that Australian actions taken in the alcohol issue should be example for other countries how to deal with alcohol related harm and burden of diseases. Their strategies are very well constructed and there has been enough studies done to complexly evaluate all the interventions and choose the right ones to make Australian situation better.

8 Summary

This thesis is discussing the harmful side of alcohol consumption and its impact on Australian society. At the beginning this work provides you an overview of harmful effects of alcohol on today's society and explain current drinking patterns with deeper focus on Australian population.

Later the Australian licensing legislation is introduced and described in detail for each Australian territory. Six of the most popular and according to researched literature most effective and cost efficient alcohol interventions have been chosen for more detailed introduction and thorough look on problematic of each of them (MLDA, volumetric taxation, advertising bans, brief interventions, RBT and drink and driving campaigns).

In the conclusions the effectiveness of these interventions is discussed. Overall opinion on Australian fight with alcohol-related harm is also included in the conclusions of this thesis. Australian policies are effective in reducing alcohol-related harm and after introduction of the interventions alcohol-related harm and burden of diseases will decrease.

9 References

ACG (2011). *Alcohol taxation reform: Starting with the Wine Equalisation Tax.* Melbourne, Australia: ACG.

ACTPC (2014). *Liquor Act 2010*. Canberra, Australia.

ACTPC Office (2013). *Liquor Regulation 2010*. Canberra Australia.

Anderson, P., & Baumberg, B. (2006). *Alcohol in Europe – Public Health Perspective: A report for the European Commission.* London, England: Institute of Alcohol Studies.

Anderson, P., De Bruijn, A., Angus, K., Gordon, R., & Hastings, G. (2009). Special Issue: The Message and the Media – Impact of Alcohol Advertising and Media Exposure on Adolescent Alcohol Use: A systematic Review of Longitudinal Studies. *Alcohol & Alcoholism*, 40(3), 229-243.

Anderson, P., Chisholm, D., & Fuhr, D.C. (2009). Effectiveness and Cost-effectiveness of Policies and Programmes to Reduce the Harm Caused by Alcohol. *The Lancet*, 373(9682), 2234-46.

Anderson, P., Laurant, M., Kaner, E., Wensing, M., & Grol, R. (2004). Engaging General Practitioners in the Management of Hazardous and Harmful Alcohol Consumption: Results of a Meta-analysis. *Journal of Studies on Alcohol*, 65(2), 191-99.

ANPHA (2013). *Exploring the Public Interest Case for Minimum (floor) Price for Alcohol*. Australia: ANPHA.

ANPHA (2014). *Tackling Binge Drinking*. Retrieved from http://www.tackling bingedrinking.gov.au/internet/tackling/publishing.nsf/content/under-the-influence

AWM (2015). *Australian War Memorial*. Retrieved from https://www.awm.gov.au /commemoration/anzac/anzac-tradition/

Byrnes, J. M., Cobiac, L.J., Doran, C. M., Vos, T., & Shakeshaft, A.P. (2010). Cost-effectiveness of volumetric alcohol taxation in Australia. *Medicinal Journal of Australia*, 192(8), 439-443.

Carragher, N. & Chalmers, J. (2011). *What are the options? – Pricing and Taxation Policy Reforms to Redress Excessive Alcohol Consumption and Related Harms in Australia*. Sydney, Australia: NSW Bureau of Crime Statistics and Research.

Casswell, S. (2012). Current Status of Alcohol Marketing Policy – An Urgent Challenge for Global Governance. *Addiction*, 107(3), 478-485.

Casswell, S. & Thamarangsi, T. (2009). Reducing Harm from Alcohol: Call to Action. *The Lancet,* 373(9682), 2247-57.

Chikritzhs, T. N., Allsop, S. J., Moodie, A. R., & Hall, W. D. (2010). Per capita alcohol consumption in Australia: will the real trend please step forward?. *Medicinal Journal of Australia*, 193(10), 594-597.

Chikritzhs, T. N., Stockwell, T., Heale, P., Dietze, P., & Webb, M. (2000). Trends in Alcohol Related Road Injury in Australia, 1990-1997. *National Alcohol Indicators*, 2, 1-4.

Cobiac, L., Vos, T., Doran, C., & Wallace, A. (2009). Cost-effectiveness of Interventions to Prevent Alcohol-related Disease and Injury in Australia. *Addiction*, 104(10), 1646-55.

Collins, D. J., & Lapsley, H. M. (2008). *The Avoidable Costs of Alcohol Abuse in Australia and the Potential Benefits of Effective Policies to Reduce the Social Costs of Alcohol*. Canberra, Australia: Department of Health and Ageing.

Crombie, I. K., Irvine, L., Elliott, L., & Wallace, H. (2007). How do Public Health Policies Tackle Alcohol-related Harm: A Review of 12 Developed Countries. *Alcohol & Alcoholism*, 42(5), 492-499.

DOH (2014). *Alcohol.* Retrieved from http://www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-drugs-alcohol-index.htm

Doran, C. M., Hall, W. D., Shakeshaft, A. P., Vos, T., & Cobiac, L. J. (2010). Alcohol policy reform in Australia: What can we learn from the evidence?. *Medicinal Journal of Australia*, 192(8), 468-470.

Doran, C. M., Vos, T., Cobiac, L., Hall, W., Asamoah, I., Wallace, A., Naidoo, S., Byrnes, J., Fowler, G., & Arnett, K. (2008*). Identifying cost-effective interventions to reduce the burden of harm associated with alcohol misuse in Australia*. Brisbane, Australia: The University of Queensland.

DRGL (2013). *Liquor Control Act 1988: Report of the Independent Review Committee.* Perth, Australia: DRGL.

DVA (2015). *The Right Mix*. Retrieved from www.therightmix.gov.au.

GSA (2015). *Liquor Licensing Act 1997.* Canberra, Australia: Commonwealth of Australia.

GTLGB (2013). *Review of the Liquor Licensing Act 1990: discussion paper*. Hobart, Tasmania: Department of Treasury and Finance.

Gruenewald, P. J., & Johnson, F. W. (2010). Drinking, Driving, and Crashing: A Traffic-Flow Model of Alcohol-Related Motor Vehicle Accidents. *Journal of Studies on Alcohol and Drugs*, 71(2), 237-248.

Hall, W., & Chikritzhs, T. (2011). The Australian alcopops tax revisited. *The Lancet*, 377(9772), 1136-37.

Handfield, P. M. (2005). *Bar Wars: Contesting the Night in British Cities.* Durham, England: Durham University.

Henstridge, J., Homel, R., & Mackay, P. (1997). *The Long-Term Effects of Random Breath Testing in Four Australian States: A Time Series Analysis.* Canberra, Australia: Federal Office of Road Safety.

Jones, S. C., Hall, D., & Munro, G. (2008). How effective is the revised regulatory code for alcohol advertising in Australia?. *Drug and Alcohol Review*, 27(1), 29-38.

Jones, S. C., & Magee, C. A. (2011). Exposure to Alcohol Advertising and Alcohol Consumption among Australian Adolescents. *Alcohol and Alcoholism*, 46(5), 630-637.

Kaner, E. F., Dickinson, H. O., Beyer, F. R., Campbell, F., Schlesinger, C., Heather, N., Saunders, J. B., Burnard, B., & Pienaar E. D. (2009). *Effectiveness of brief alcohol interventions in primary care populations (Review).* England: John Wiley & Sons, Inc.

Loxley, W., Gray, D., Wilkinson, C., Chikritzhs, T., Midford, R., & Moore, D. (2005). Alcohol Policy and harm reduction in Australia. *Drug and Alcohol Review*, 24(6), 559-568.

Loxley, W., Toumbourou, J. W., Stockwell, T., Haines, B., Scott, K., Godfrey, C., Waters, E., Patton, G., Fordham, R., Gray, D., Marshall, J., Ryder, D., Saggers, S., Sanci, L., & Williams, J. (2004). *The Prevention of Substance Use, Risk and Harm in Australia: A Review of the Evidence.* Canberra, Australia: Department of Health and Ageing.

MCDS (2006). *National Alcohol Strategy 2006-2009: Towards Safer Drinking Cultures.* Canberra, Australia: Commonwealth of Australia.

MCDS (2011). *National Alcohol Strategy 2010-2015.* Canberra, Australia: Commonwealth of Australia.

McKnight, A. J., & Voas, R. B. (2004). Prevention of alcohol related road crushes. In Heathern N., & Stockwell, T. (Eds.), *The essential handbook of treatment and prevention of alcohol problems.* Sussex, England: John Wiley & Sons, Ltd.

Moodie, A. R., Daube, M., Carnell, K., NPHT, & DHA (2009). *Australia - the healthiest country by 2020: preventing alcohol-related harm in Australia: a window of opportunity: including addendum for October 2008 to June 2009. Technical report 3.* Canberra, Australia: Commonwealth of Australia.

Moodie, A. R., DCaube, M., Carnell, K., NPHT, & DHA (2009). *Australia – the healthiest country by 2020: National Preventative Health Strategy: Overview.* Canberra, Australia: Commonwealth of Australia.

NHMRC (2009). *Australian Guidelines to Reduce Health Risks from Drinking Alcohol.* Canberra, Australia: NHMRC.

NTA (2015). *Liquor Act.* Canberra, Australia: Commonwealth of Australia.

OLGR (2015). *Liquor Act 2007*. Canberra, Australia: Commonwealth of Australia.

QPC (2014). *Liquor Act 1992.* Canberra, Australia: Commonwealth of Australia.

Rhem, J., Mathers, C., Popova, S., Thavorncharoensap, M., Teerawattananon, Y., & Patra, J. (2009). Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *The Lancet*, 373(9682), 2223-33.

Room, R. (2006). International control of alcohol: alternative paths forward. *Drug and Alcohol Review*, 25(6), 581-595.

Rooy, C. (2014). *Policy Talk: The role of taxation in reducing alcohol-related harm.* Melbourne, Australia: Australian Drug Foundation.

Skov, S. J., Chikritzhs, T. N., Kypri, K., Miller, P. G., Hall, W. D., Daube, M. M., & Moodie, R. A. (2011). Is the "alcopops" tax working? Probably yes but there is a bigger picture. *Medicinal Journal of Australia*, 195(2), 84-86.

Stockwell, T., Zhao, J., Giesbrecht, N., Macdonald, S., Thomas, G., & Wettlaufer, A. (2012). The raising of minimum alcohol prices in Saskatchewan, Canada: Impacts on consumption and implications for public health. *American Journal of Public Health*, 102(12), 103-110.

Trifonoff, A., Andrew, R., Steenson, T., Nichilas, R., & Roche A. M. (2011a). *Liquor Licensing Legislation in Australia: A Jurisdictional Breakdown.* Adelaide, Australia: Flinders University.

Trifonoff, A., Andrew, R., Steenson, T., Nichilas, R., & Roche A. M. (2011b). *Liquor Licensing Legislation in Australia: An Overview.* Adelaide, Australia: Flinders University.

Trifonoff, A., Andrew, R., Steenson, T., Nichilas, R., & Roche A. M. (2011c). *Liquor Licensing Legislation in Australia: Police Expectations and Experiences.* Adelaide, Australia: Flinders University.

VCGLR (2011). *Liquor Control Reform Act 1998.* Canberra, Australia: Commonwealth of Australia.

Wagenaar, A. C., & Toomey, T. L. (2000). Alcohol Policy: Gaps between Legislative Action and Current Research. *Contemporary drug problems*, 27, 681-733.

WHO (1993). *The ICD-10 Classification of Mental and Behavioral Diseases.* Geneva, Switzerland: WHO.

WHO (2002). *The World Health Report: 2002.* Geneva, Switzerland: WHO.

WHO (2007). *Regional Strategy to Reduce Alcohol-Related Harm*. Geneva, Switzerland: WHO.